

Site Preparation & Reforestation

GENERAL METHODS



RAPID REGENERATION OF FOREST LAND following final harvest or natural disaster is both economically and environmentally important. Any increase in erosion, water yield, and storm flow coming from a logged site diminishes rapidly as the site revegetates.

Root systems remain in place many years after trees are cut and provide soil stability which reduces the risk of erosion. Trees also intercept water and impede storm water runoff. Many sites require some type of treatment to accomplish quick and effective regeneration of desirable tree species, or to reduce some undesired effects of harvesting.

BMPs for Site Preparation & Reforestation

- Clearly define boundaries of all smzs before beginning site preparation activities.
- Ripping, shearing, windrowing, and mechanical planting should follow the contours of the land to reduce potential erosion hazard.
- On steep slopes or highly erosive soils avoid intensive site preparation. Use herbicides, hand tools, and / or prescribed fire, but be aware that extremely hot fires may significantly increase erosion potential.
- Hand plant steep, erodable sites as soon as possible after final harvesting and site preparation.
- Where accelerated erosion is likely, use methods which leave logging debris and other natural forest litter scattered over the site.
- Minimize moving soil into windrows and piles.
- The smz along streams should be protected by planning the use of equipment so as to minimize disturbance of these areas. Stream crossing construction should minimize disturbance of the area in which the crossing is being constructed. Such crossings should be restored promptly.
- Equipment operators should be trained and appropriate planning done so that soil disturbance, compaction, and displacement is minimized.
- In order to minimize erosion, firebreaks should have water control structures properly installed and maintained.
- Site preparation activities should not enter smzs and cross stream channels.
- Provide water outlets on bedded or furrowed areas at locations that will minimize movement of soil. Discharge water onto a vegetative surface.

AVOID

- Damage to existing water control devices (i.e. culverts, wing ditches). Site preparation and planting equipment should avoid crossing or turning around in roads, road ditches, and wing ditches. Damages should be repaired immediately.
- Intensive mechanical site preparation on steep slopes or on sites that have high potential for erosion.
- Constructing windrows which will funnel surface runoff into perennial, intermittent, or ephemeral streams.
- Blocking any drainage with beds, windrows, or similar structures.

Two major problems associated with site preparation include soil erosion and potential sedimentation from runoff. Primary factors contributing to accelerated erosion from runoff are percent of the area with exposed soil, type of soil, degree of slope, and ground cover.

Techniques used for site preparation should be based on soils, slope, condition of the site, natural vegetation, crop tree species, and cost. Soils with a shallow surface layer generally have limited capacity to absorb water and are more likely to erode. Steeper slopes provide more rain-water runoff velocity, and thus energy, to erode soils. Ground cover helps hold soil in place and dissipates some of the energy of rainfall.



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